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By Eugene Lyman Fisk, M. D.
Medical Director
POSTAL LIFE INSURANCE COMPANY, NEW YORK

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Address delivered before the
SECTION ON SOCIAL AND ECONOMIC SCIENCE,
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE
Cleveland, O., January 3, 1913

POSSIBLE FUNCTIONS OF THE LIFE INSURANCE COMPANY IN THE CONSERVATION OF HEALTH

By Eugene Lyman Fisk, M. D.

Medical Director, Postal Life Insurance Company, New York; Fellow of the New York Academy of Medicine; Member of the American Medical Association; American Association for the Advancement of Science; National Association for the Study and Prevention of Tuberculosis; Associated Physicians of Montclair, N. J., etc.

I am deeply conscious of the privilege I enjoy, and of the responsibility that rests upon me in delivering a message to this section concerning this new source of power for lifting some of the burdens of humanity. The phrase "prolongation of life" with its mean implication of sneaking a few extra years of existence, annoys me exceedingly whenever I see it in print. It is true that the possible prolongation of the lives of policyholders, or, as I prefer to state it, the lowering of the insurance death-rate, constitutes the business warrant for the activities to be described in this paper, but the call in this work to those who are most deeply interested in it, and, I am sure, its chief claim to consideration by this Association, lie in the promise that it offers, not of a mere mathematical increment to the years of life, but of an increase in the meaning, and the power, and the satisfaction of existence; not merely *longer* life, but *better* life.

This new, or rather, neglected source of power for human betterment, is found in a business, the magnitude of which may well appeal even to the scientific imagination. More than 25,000,000 old-line policyholders, paying over $600,000,000 in premiums, have intrusted to the life companies of this country $4,000,000,000 in assets, to protect $18,000,000,000 of insurance in force. An army of 20,000 agents and 80,000 medical examiners, in addition to home-office and branch-office employees, banks of collection and deposit, widely distributed investments, and more than $400,000,000 annually distributed to policyholders in claims, endowments, etc., show how closely interwoven with the social structure is this wonderful system of less than 75 years' growth in America. If we grant, as has been estimated, that in reaching one policyholder we reach a group of at least three individuals, it becomes evident that the life-insurance companies have available and constantly open channels of communication with three-fourths of the population. They can almost literally feel the pulse of the nation.

Now it is just as obvious that this aggregation of men, money and machinery can render a much broader service to society than the collection of premiums, the investment of assets, and the payment of death-claims as it is that the earth is spherical, a long unrecognized though obvious fact. If the theory of evolution could lie quivering in solution in human thought from the time of the early Ionic philosophers until Spencer and Darwin administered the shock that crystallized it, and Huxley said: "Why didn't we think of it before," it is not strange that the theory of health-conservation in life insurance should have lain dormant during the brief period of life-insurance development. Unfortunately it is still dormant in all but a very few companies.

There are three main reasons why a life-insurance company should practice health-conservation among its policyholders:

1. The machinery is available.
2. It can be utilized, certainly without loss, and probably with substantial gain, both to policyholder and company.
3. Granting these premises, the vast extent of the life insurance business imposes a public obligation to exercise this power for social betterment.

THE AVAILABLE MACHINERY OF CONSERVATION

The seventy-five million points of contact with the public have already been referred to, and it should be remembered that the channels of communication are continuously open, and that this contact, through premium notices or collectors, is repeated weekly in the industrial, and quarterly, semi-annually or annually in the ordinary branch. Messages regarding the wonderful merits of the Company have repeatedly been conveyed through such channels; why not messages of good health and happiness? A life-insurance company is a veritable treasury of sociological material, enabling its medical and scientific staff to give greater precision and force to ordinary instruction in personal hygiene. The policyholder will often accept the advice of his life-insurance office, because he reasons that behind the science there is the cold, calculating force of business judgment. It is one of those rare moments in modern life when the producer and the consumer meet on common ground and shake hands; the profit of one increasing the profit of the other. It is almost like finding the fourth dimension.

In addition to health-hints and instructions, distributed with premium notices and by collectors, agents, etc., periodical bulletins may be issued covering the fundamental principles of healthful living, many of them well-known, but forgotten or disregarded in the hurry of existence. Such bulletins, if properly edited, would prove antidotal to the mind-poisons and sensational pseudo-science that now circulate so freely. Fashion, imitation, suggestion—all have their value in this work. The life-insurance company, by persistent education, can help to make temperate and hygienic living fashionable. Some people dread bad form more than bad morals or bad health.

COÖPERATION WITH BOARDS OF HEALTH AND OTHER AGENCIES

Life-insurance companies can render a valuable public service by upholding the health-officer in the performance of his duty, and by urging policyholders and the public to require a high grade of ability in such officials, to properly equip them with laboratories, etc., and to pay salaries that will command the right kind of service. In communities where the companies are sustaining a high mortality because of backward civilization and gross sanitary neglect, their experience may serve as a lesson to the agents, medical examiners and prominent policyholders in such sections, and swing them into line for sanitary reform. The passage of laws for the proper registration of births and deaths in the non-registration states could be materially expedited by vigorous work on the part of the life-insurance companies. Even now the Association of Life Insurance Presidents is moving in this particular matter.

Under the stimulus of this conservation-work, a life-insurance office would naturally develop a bureau of research for the collection of extrinsic evidence from the laboratory, the clinic, the bedside and from the various sources of vital statistics, and for the interpretation of such evidence in the light of the intrinsic knowledge gained from the constant study of large masses of insured lives. Such a bureau would serve, not only as a valuable source of information for policyholders, but as a feeder for educational and social-reform agencies, which are eagerly seeking this kind of material.

A life-insurance company should also encourage the formation of health leagues throughout the country, to serve as foci of education and of active effort for sanitary reform, and for the encouragement of higher standards of personal hygiene. Cooperation with such leagues, by furnishing material, information, suggestions, etc., would bring the public and the company closer together, and in every way prove mutually beneficial.

It is needless to go into further detail. When this work is once commenced, a natural process of evolution will bring new opportunities and new ideas.

PERIODIC MEDICAL EXAMINATION

The most positive and direct way to reach the policyholder is by extending to him annually the privilege of a free medical examination. This principle of periodic examination or inspection is applied by business or government to the life-insurance company itself, to banks, elevators, steam-boilers, steam-vessels, life-preservers, garbage-cans, almost every institution or machine employed by man that can possibly go wrong except the most delicately adjusted and wonderful machine of all—the one that he lives in all the time—his body. It is true that we inspect our school-children—most of whom are leading healthful, happy lives—but why neglect their parents, many of whom are seriously out of touch with nature, and heading for physical break-down, without the slightest consciousness of their danger? What is the use of inspecting and condemning poisoned food, if we keep on unconsciously manufacturing poisons within our bodies? The smug, egotistical confidence in his physical soundness of the average careless liver is, in a measure, a physiological protection against neurasthenia, but it is not a protection against arteriosclerosis, Bright's disease or heart-disease, conditions that often do not warn of their presence until it is too late to check them.

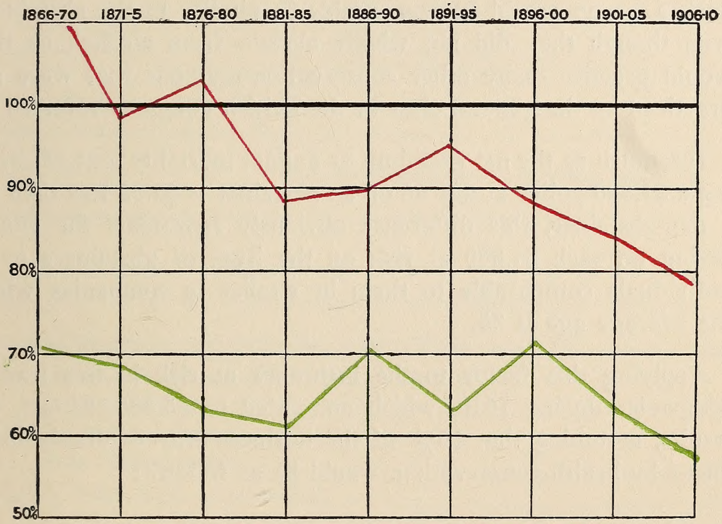
The medical profession is now remoulding itself along the lines of prevention rather than cure. If the 80,000 physicians employed in examining become stimulated and trained by these periodic examinations to more skilfully detect incipient disease or disease-tendencies, an immense impetus will be given to medical science. The public and the profession will be brought closer together, and another rare moment in life will arrive when greater prosperity to the doctor means less disease in the population.

TO WHAT EXTENT CAN THE DEATH RATE BE LOWERED AMONG INSURED LIVES?

Many insurance-men doubt whether the present favorable mortality among selected insured lives can be lowered at a cost that will be covered by the mortality-savings. There is a feeling that the death-rate among insured lives follows a sort of fixed law. Certainly it does, if the conditions remain unchanged. But the conditions are neither ideal nor unchanging. My own researches in 1907,[1] recently confirmed by the medico-actuarial investigation of the experience of American companies, showed a remarkable improvement at the younger ages but decided deterioration in vitality among those over sixty during the past 30 years.

That the death-rate in the average company, indeed in all companies, is too high, and can surely be lowered, is illustrated by the experience of a British company, the United Kingdom Temperance and General Provident Institution.[2]

Experience of the United Kingdom Temperance and General Provident Institution of London. Healthy Males—Whole-Life Policies—Amounts—1866-1910.



Expected Mortality, British O^{m} Table...... ▬ 100.00%
Ratio Actual to Expected Mortality, Non-Abstainers.................... ▬ 91.27%
Ratio Actual to Expected Mortality, Abstainers........................ ▬ 66.25%
Mortality among Abstainers 27.4% less than among Non-Abstainers.

In this company the total abstainers are placed in a class separate from the balance of the risks, about equal in number, all supposedly moderate drinkers, and carefully selected lives. This company has a very favorable general mortality, but the death-rate among its abstainers for the past forty-four years was 27% lower than among the general class, which, however, exhibits a favorable mortality, 91% of the British O^m Table. We have here an illustration of how the death-rate, even in a group of carefully selected lives may be lowered by correct living habits. It is reasonable to contend that if the general class in the company referred to had followed the same careful habit of living as did the abstainers, their mortality would have been 27% lower. These figures are fully supported by recent British, and American experiences.[3]

Now, by conservation methods along educational lines, a company could probably create among at least 10% of its policyholders a sense of responsibility for the custody of their bodies. Such a group would be comparable in vitality to the abstainers, even though they did not wholly abstain from alcohol, as they would practice many other conservation-methods that were not practiced by the general class in the British company referred to.

Inasmuch as the net premium or annual mortality cost of carrying a $1,000 policy at age 35 on an abstainer is $3.03 less than for a non-abstainer, this difference obviously represents the annual saving on each $1,000 at risk on the lives of abstainers or of individuals comparable to them in vitality in companies where the average age is 35.

Applying this factor to the insurance at risk in five leading companies during 1910, which amounted to $5,585,794,093, the results, assuming that 10% of the business was favorably influenced by health-conservation, would be as follows:

Mortality Savings from Conservation......	$1,692,496
Deduct Cost of Educational Health Bureau..	150,000
Conservation Savings	$1,542,496

This method has the merit of being derived from an actual ground of experience.

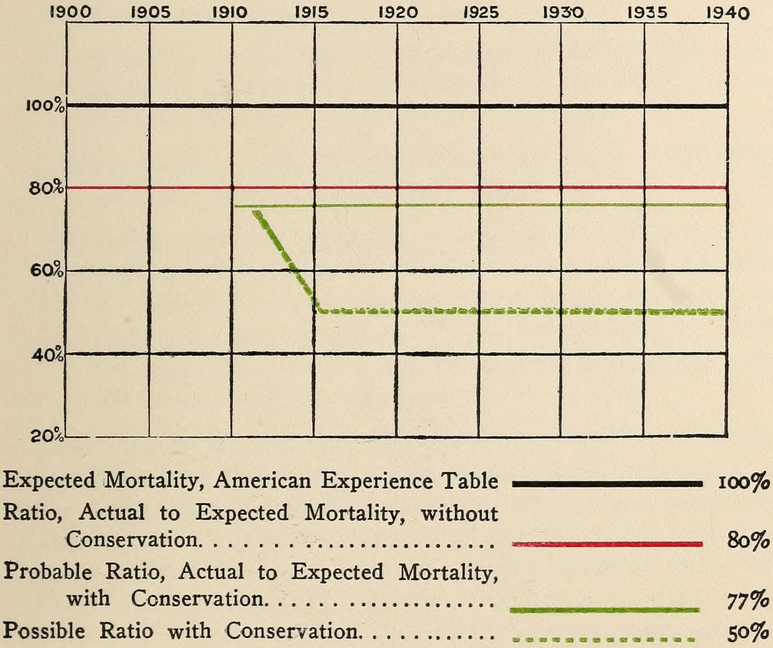
Applied to the whole amount of old line insurance in force the annual saving would exceed $5,000,000 and 9,000 lives.

The general effect on a company's mortality over a period of years is better expressed as follows:

The net annual death-payments in the five companies above referred to, was in 1910, $44,364,142. A reduction of these payments by $1,692,496, the conservation-savings on 10% of the amount at risk, would equal 3.81%.

Employing this factor the results would be as indicated in the following chart:

Actual and Possible Mortality Fluctuations in a Group of Five Companies, with and without health-conservation.



This chart exhibits the actual mortality experience of five leading companies from 1900 to 1910, and shows an average mortality of about 80% of the American Experience Table. Assuming that these companies came under the influence of conservation in 1910, the curve from then onward would fall and fluctuate around 77% of the American Table, reflecting a reduction of 3.81% in general mortality, due to conservation.

Without conservation the line would continue indefinitely at about 80%. The maximum influence of conservation is shown in the lower line, approximating 50% of the American Experience Table.

A reduction in the cost of insurance would result, through the distribution of these mortality gains in dividends.

No attempt is here made to estimate the enormous possible reflex benefit to the general public from these activities.

THE TEST OF EXPERIENCE

In 1907 [4] I advised educational work among our policyholders along health-lines, but no steps were taken until Mr. E. E. Rittenhouse became president of the company (Provident Savings Life Assurance Society, subsequently reinsured by the Postal Life Insurance Company), when through his executive courage a health-bureau was established in our medical department, with the following objects in view:

The issuance of health bulletins several times a year, giving instruction in personal hygiene, sanitation and disease prevention, strictly within ethical limitations.

The issuance of statistical and other pamphlets relating to disease-prevention.

Free medical examination once a year to policyholders desiring it, for the purpose of detecting disease in time to check or cure it.

Correspondence with policyholders desiring information regarding sanitation, personal hygiene, etc.

No medical treatment or advice to be given. The result of the medical examination, if unfavorable, to be conveyed, with the policyholder's permission, to the family physician, or some physician designated by the policyholder, in order that such information might be properly acted upon without unduly alarming the patient.

Much inspiration was derived from the work of this Association, through its Committee of One Hundred. Professor Irving Fisher's Report on National Vitality [5] contains much suggestive material, and his vigorous appeal to the Association of Life Insurance Presidents for assistance in public-health work, together with Dr. Burnside Foster's address[6] before the same body, in favor of periodic medical examination every 5 years, exerted a decided influence upon our plans.

MORBIDITY EXPERIENCE

Of the risks examined by the bureau from August, 1909, to June, 1912, 40% were found impaired. Of course, a great many impaired risks sought these examinations, hoping for relief, which explains this high percentage; but of the risks found impaired, 44% were not aware of any impairment, a striking evidence of the need for such a system. The distribution of the impairments in these two groups is shown in the following tables:

ANALYSIS OF RISKS FOUND IMPAIRED.
FREE ANNUAL HEALTH BUREAU EXAMINATIONS.

Average Age 49 years 9 months

Amount of Insurance $1,590,635.

DISEASES	Ages 20—30	Ages 30—40	Ages 40—50	Ages 50—60	Ages 60—70	Ages 70 over
Affections of Heart, Blood Vessels and Kidneys, Diabetes..............	% 4.98	% 13.85	% 21.65	% 31.60	% 23.37	% 4.54
% at each age-period unaware of such impairment.................	% 65.21	% 57.81	% 63.00	% 60.27	% 56.48	% 57.14
Pulmonary.............	% 4.76	% 35.71	% 33.33	% 14.29	% 11.90	% —
Nervous................	% 6.82	% 22.72	% 38.63	% 22.72	% 9.09	% —
Digestive...............	% 1.66	% 33.33	% 25.00	% 31.66	% 8.33	% —
Miscellaneous...........	% 2.22	% 17.77	% 42.22	% 22.22	% 13.33	% 2.22
Distribution of all impairments by age periods..	% 4.59	% 17.91	% 25.11	% 29.09	% 19.60	% 3.37

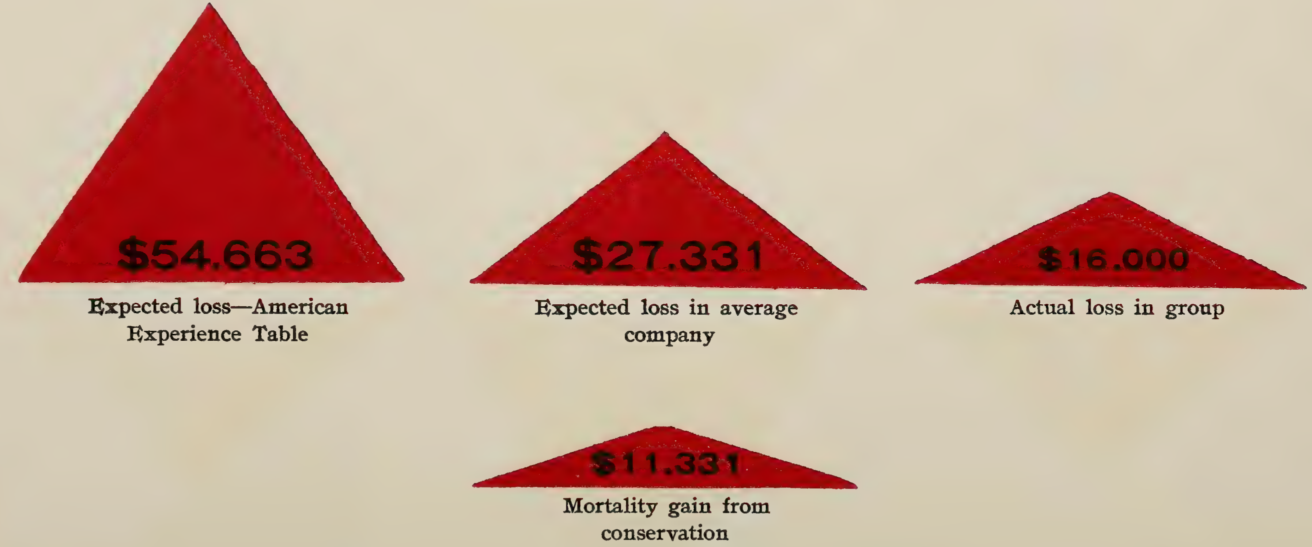
The above should be interpreted as follows: of the risks showing affections of Heart, Blood Vessels, Kidneys, and Diabetes, 4.9% were between 20 and 30, 13.8% between 30 and 40, etc. 63% of those between 40 and 50 affected with diseases of Heart, Blood Vessels, Kidneys, and Diabetes, were unaware of impairment. 4.5% of all impairments found, occurred in the age group between 20 and 30, 17.9% between 30 and 40, etc. 96% of those unaware of impairment exhibited affections of Heart, Blood Vessels, Kidneys, and Diabetes.

Attention is called to the large percentage of degenerative affections found at middle life, among those who supposed that they were in sound health.

MORTALITY EXPERIENCE[7]

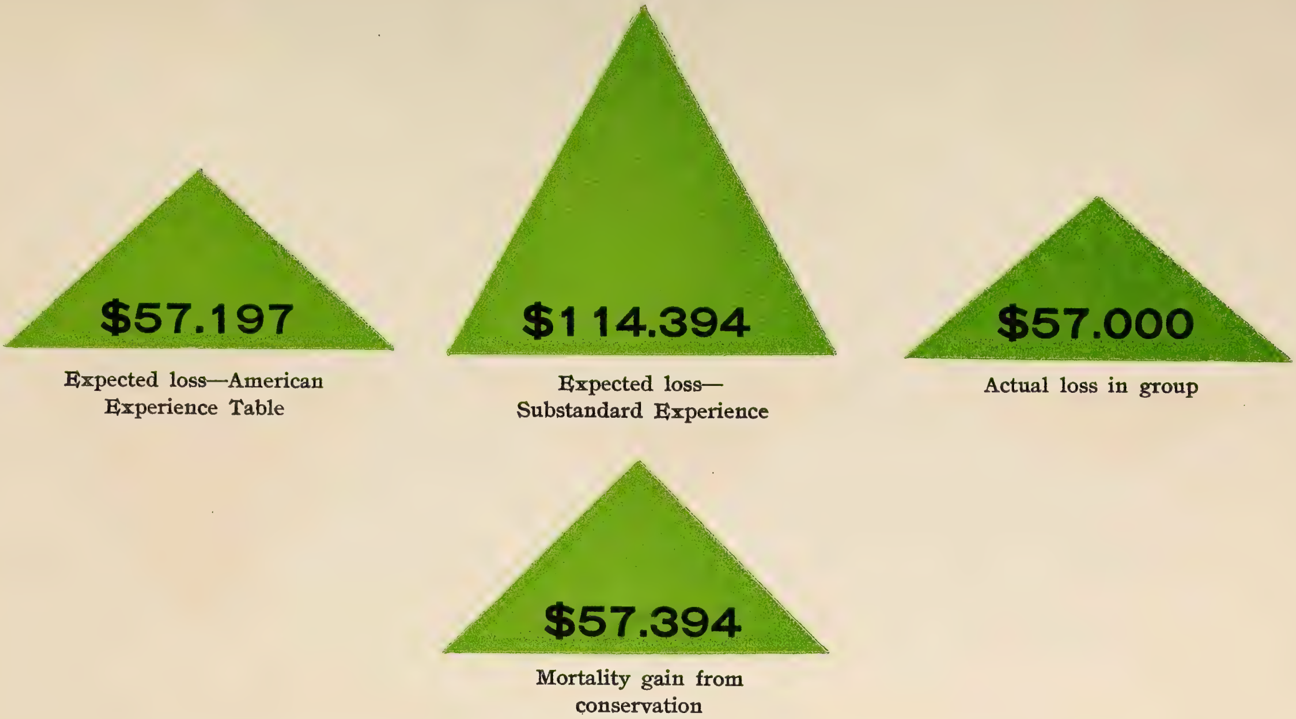
The results of the periodic examinations were analyzed through the courtesy of the Central Bureau of the Medico-Actuarial Investigation, and the following charts exhibit the mortality experience:

GROUP I. No Impairment Found



Analysis of policyholders who availed themselves of the privilege of free annual medical examination, 1909-1912.

GROUP II. Impaired



Analysis of policyholders who availed themselves of the privilege of free annual medical examination 1909-1912.

I call your attention to the fact that in the group found unimpaired, the mortality was only 29% of the American Table. This, on a conservative estimate, is 21 points lower than the loss to be expected in an average company, among recently-selected lives, i.e., 50% of the American Table. These risks, although unimpaired, were in contact with the bureau, and many received advice as to living habits, eating, drinking, smoking, etc., and the mortality saving indicated is properly credited to the bureau.

The group reported impaired comprised some that were almost moribund, and appealed to the bureau as a last resort. An expected mortality of 200% of the American Table is an extremely conservative figure, but the actual mortality was only 99% of the Table, showing a saving of $57,394. That is, where we expected 200 to die, only 99 actually died.

The net saving, on this conservative estimate, for the thirty-two months of the bureau's operation, was $53,890 over and above the cost of operation, or at the rate of about $20,000 a year. Now the annual saving predicated for the 5 leading companies upon the hypothesis derived from the British experience, was $1,542,496. If we deduct from that amount the cost of examining 5% of their policyholders, about $280,000, the net saving would be $1,262,496. On this basis, the saving in our company would have been only about $12,000 annually, instead of $20,000. The actual test of experience shows the preliminary estimate to have been well within the mark. Of course there has been an additional saving that we cannot trace from the influence of the educational work upon the policyholders who have not been examined, and a number of policyholders have been induced to follow the same system of periodic examination through their family physicians.

In support of our statistical evidence we have many communications from individual policyholders testifying to benefits derived from the examination.

SUMMARY.

It is my humble opinion that the life-insurance business has come to a sort of parting of the ways. On the one hand it can go on successfully fulfilling a splendid mission in the financial protection of home and family, and continue as a veritable bulwark of civilized society, until, perhaps, it falls into the arms of State Insurance;[8] but when it has done all this, it will merely have scratched the ground wherein lies buried a wealth of opportunity. Opportunity for coöperation with the thinking men and women who leaven the lump of humanity into activity and progress; opportunity to reach out and weave these beneficent elements of the life-insurance system into the very fabric of family life; opportunity to make the company mean something living, vital and continuously helpful to the policyholder. If we grasp these opportunities the day of State Insurance may be at least postponed until individual initiative and competition shall have broadened and developed the present system to perform all its possible functions. To bring this about, the pressure of public opinion is needed. Our company is the only one that in addition to its many conservation activities extends the privilege of free annual medical examinations. Several recently organized companies and some assessment organizations are distributing occasional pamphlets or health literature, but the Equitable[9] and the Metropolitan[10] are the only leading companies that are at all active in this matter. The Metropolitan commenced its anti-tuberculosis work among its employees at about the time our bureau was established, and later extended a nursing service among its industrial policyholders, which has saved many lives and relieved much suffering. Millions of bulletins and pamphlets have also been distributed. The Equitable's work is stimulating both individual and community action, the latter through the public-health service, but chiefly through its magazine, "The Human Factor," and other pamphlets, and addresses issued by its Conservation Commissioner, Mr. E. E. Rittenhouse.

The health bureau established in the Association of Life Insurance Presidents in 1910, is keeping alive the conservation idea,[11] but it is simply a nucleus, and is in no way equipped to attain results at all commensurate with the vast interests represented. But it is there—a concession to the principle that there is a responsibility which must some day be fully assumed.

The American Association for the Advancement of Science has already rendered splendid service in the cause of conservation, and I hope it will keep up the good work of creating a public sentiment that will arouse into full activity these tremendous forces for the prevention of human suffering and for the advancement of the race.

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